

## **Abstract**

The present invention relates to a clean process for the degradation of steroidal sapogenin to produce 16-dehydropregnolone and its analogs. The pure or the crude pseudo steroidal sapogenin, derived from steroidal sapogenin, dissolved in organic solvent, reacts with hydrogen peroxide with or without metal compound and acid as catalyst, and the crude products directly go through elimination and hydrolization in the presence of base to give 16-Dehydropregnolone or its analog, accompanied with the other product 4R(or S)-methyl-5-hydroxy-pentate, which is converted to 4R(or S)-methyl- $\delta$ -pentyl lactone after acidification and extraction from the water layer. This technology improved the utilizing degree of steroidal sapogenin, improved the yield, and cleared up the chromium pollution in the former technique. In a word, the method disclosed in this invention is more suitable for manufacture.